CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	West End Water Intake
Proposed Implementation Date:	Spring/Summer 2022
Proponent:	City of Billings
Location:	A Portion of Govt Lot 1 in the NE ¼ of Section 4, Township 2 South, Range 25 East (Yellowstone River – Public Land Trust)
County:	Yellowstone County

I. TYPE AND PURPOSE OF ACTION

The Proponent, City of Billings, is requesting a ±1.10-acre easement in the Yellowstone River for the location of a new water intake structure located in Section 4, Township 2 South North, Range 25 East. The easement extends approximately ±150' feet south from the north riverbank and is approximately ±258' in width.

The City of Billings is planning on expanding their water distribution to accommodate for the increasing population growth and water needs. They have recently purchased a parcel of land in Government Lot 1 of Section 4, Township 2 South, Range 25 East, adjacent to the State's River ownership. The proponent plans on building a water intake on their land and extend it into the Yellowstone River in order to gather water. That water will then be pumped to a separate City-owned property on the western edge of the current city limits to turn into a water retention and storage facility with a new water treatment facility. The current city water treatment plant is located on the east end of Billings.

The municipality and surrounding area have seen increased population growths and the current city water operations facilities will be outpaced by the growth and demand on water resources. Additionally, the costs to pump and provide water services from their current facility are increasing due to the distance and uphill elevation from that current operational water treatment. By developing the west end water treatment facility, the city will be able to reduce pumps needed to move the water to higher elevations. The intake in the Yellowstone River will be able to use a mix of gravity and pumps to allow the water to reach the retention ponds.

The intake structure will be constructed against the existing bank. The proponent is applying for a larger area than just the structure to allow for future maintenance needs as they arise.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

No formal public scoping was performed by DNRC for this proposed project.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

- 310 Conservation Permit
- Floodplain Permit
- Section 404 Permit
- Section 10 Permit
- 318 Authorization

All permits will be secured prior to the construction of the new intake structure that is within the easement corridor that the proponent is applying for.

3. ALTERNATIVES CONSIDERED:

Proposed Alternative: Approve the request by the City of Billings to issue an easement for the installation of a water intake system within the Yellowstone River in the Northeast¼ of Section 4, Township 2 South North, Range 25 East.

No Action Alternative: Deny the request by the City of Billings to issue an easement for the installation of a water intake system within the Yellowstone River in the Northeast¼ of Section 4, Township 2 South North, Range 25 East.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The easement area and project lay within the bank and the riverbed of the Yellowstone River. The riverbed is within unglaciated areas of the Missouri Plateau and is comprised of sedimentary rocks, mainly sandstone.

The project construction consists of building a raw water intake structure and pump station on the north bank of the Yellowstone River. The construction will consist of clearing out a small portion of sediment and debris and placing concrete forms to install the concrete structure. None of said materials will be removed from the Yellowstone River and only displaced to allow for construction and keeping the intake clear.

The proposed action will would result in minimal disruption to the riverbed during the construction and installation of the intake structure. The easement corridor will allow for future maintenance if necessary. No significant long-term adverse impacts to geology and soil quality, stability is expected as a result of implementing the proposed alternative.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed action may cause a short term, but insignificant increase in turbidity during the construction and installation of the new outfall pipe. The proposed area currently has riprap installed along the northern bank near the Duck Creek Bridge. Construction work will be completed during low water flow in the Yellowstone River so as to minimally impact the riverbed. The proposed action is not expected to have a significant adverse impact on water quality, quantity or distribution.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Implementation of the proposed action will result in a temporary increase in emissions from heavy equipment that will be used in the during the construction and maintenance of the raw water intake structure. Due to the short nature of maintenance, no significant long term adverse impacts to air quality are expected by implementing the proposed action.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The proposed action would allow the proponent to install a new raw water intake and perform maintenance on the structure within the Yellowstone River without any further permitting from DNRC Trust Lands. The portion of the project that is on state-owned land is entirely in the Yellowstone River. No significant impacts to vegetative cover, quantity and quality are expected by implementing the proposed action.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

The installation of a raw water intake structure in the Yellowstone River will result in a new permanent structure in the river. The intake is designed with mesh to allow water through and block aquatic species from becoming trapped.

The project construction will be completed in low water and seasonally colder months when many migratory birds and nesting habitats would be impacted in the area nor fish species would be spawning in the waterway. City of Billings plans to perform maintenance in their proposed easement corridor during the same timeframe in the future for efficiency unless an emergency occurs.

Due to the relatively short project duration and minimal impacts to the area, no significant adverse impacts to terrestrial, avian and aquatic life and habitats are expected to occur as a result of implementing the proposed alternative.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search of the Montana Natural Heritage Program database indicated the following species of concern have been observed in or near the proposed section:

- **Snapping Turtle** *(Chelydra serpentina)*, **Spiny Softshell** *(Apalone spinifera)*, **Sauger** *(Sander canadensis)*, **Plains Hog-nosed Snake** *(Heterodon nasicus)*
- **Bald Eagle** *(Haliaeetus leucocephalus)*, **Great Blue Heron** *(Ardea herodias)*, **Pinyon Jay** *(Gymnorhinus cyanocephalus)*
- **Spotted Bat** *(Euderma maculatum)*

Bat Roosts (Non-cave) have been discovered in the area. There are also potential species of concern that have the possibility of having habitats or being observed in the surrounding area.

The proponent plans for future maintenance during low water and winter season when many of species will not be within the easement corridor. The proposed alternative would only disturb state-owned land in the Yellowstone River, therefore there are not expected to be any significant long-term adverse impacts.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

The proposed alternative would only disturb state-owned land in the Yellowstone River, therefore no cultural resources are expected to be discovered or impacted. No significant adverse impacts to historic or archaeological sites on state-owned land are expected as a result of implementing the proposed alternative.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed action would allow for installation and future maintenance of a raw water intake in the Yellowstone River. Upon completion of construct, the intake structure will be visible from both the river and the nearby Duck Creek Road. The structure is not large, nor does it produce significant audible sounds. After rehabilitation of the occurs, the aesthetic view will not be any different from other parts of the Yellowstone River. The only short-term impact would be from the noise of the construction site and a portion of the intake itself will be underwater and not visible. Therefore, implementation of the proposed action is not expected to cause a significant adverse impact to the aesthetical nature of the environment.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

Implementing the Proposed Alternative is not expected to result in a significant adverse impact on environmental resources.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The easement is considered Phase 1 of the Billings intake system. The City of Billings is currently looking at developing rock structures or weirs along the southern bank of the Yellowstone River to direct water flow over their intake, which will be in a later Phase 2 after construction of the intake commences. If the proponent decides the structures are necessary, a separate application and evaluation will be completed at that time for issuance of a license. There are no other known studies or future actions planned for this Trust land parcel.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

No significant adverse impacts to human health and safety would occur as a result of implementing the proposed alternative.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

No significant adverse impacts to industrial, commercial and agricultural activities and production would occur as a result of implementing the proposed alternative.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

The proposed action will have no significant impact on the quantity and distribution of employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Due to the nature of the project, implementation of the Proposed Alternative is not expected to have a significant impact on local and state tax base and revenues.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

The implementation of the proposed alternative will allow for the local municipality to meet growing demands for clean water. By implementing this action, the proponent will be able to hold and process potable water without the need and cost of pumping water from their current and only water treatment facility miles away. In addition, it would provide some redundancy to the water treatment system and allow for water to be treated and added to the city system during times when the current water plant is not operational. Implementing the proposed alternative will not generate any additional demands on governmental services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

Implementation of the proposed alternative will not conflict with any locally adopted plans.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

The proposed action is not expected to cause any significant adverse long-term impacts to access and quality of recreation and wilderness activities.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No significant adverse impacts to density and distribution of population and housing would occur as a result of implementing the proposed alternative.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by the proposed alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

Implementation of the Proposed Alternative is not expected to have a significant adverse impact on cultural uniqueness or diversity.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The Public Land Trust will benefit by getting a one-time fee of $6,500.00, who is the beneficiary of a state-owned riverbed.

EA Checklist Prepared By:	**Name:**	Joe Holzwarth	**Date:**	13 July 2022
	Title:	Area Planner, Southern Land Office		

V. FINDING

25. ALTERNATIVE SELECTED:

After review, the proposed alternative has been selected and it is recommended that the City of Billings be granted the ±1.10-acre easement in the Yellowstone River for the installation and maintenance of a new raw water intake structure. The structure within the proposed easement is located in the Yellowstone River in a portion of Govt Lot 1 in the NE ¼ of Section 4, Township 2 South North, Range 25 East in Yellowstone County. The easement is ±258" in width and extends south from the north riverbank for 150' as shown in 'Exhibit A.' By granting this easement, the local municipality will be able to keep up with the higher demand as the urban area continues to grow, as well as redundancy by having a second water treatment plant. This alternative can be implemented in a manner that is consistent with the long-term sustainable natural resource management of the area.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The potential for significant adverse impacts to the Trust lands listed above are minimal due to the nature of the proposed action affecting only a small portion of the Yellowstone River. The easement will allow the proponent to build and operate a new raw water intake structure to supply growing demand for water. Additionally, the easement will allow the proponent future access to perform maintenance without having to secure additional permits from the DNRC. There are no natural features that are expected to be impacted and produce significant adverse impacts if the proposed action is implemented.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

EA Checklist Approved By:	**Name:**	Jeff Bollman, AICP		
	Title:	Area Manager, Southern Land Office		
Signature:	Jeff Bollman		**Date:**	7/13/2022

Exhibit A – Intake and Easement Location